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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/667,807	09/22/2000	MARK A. DARTY	104175	9676

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EXAMINER

ALPHONSE, FRITZ

ART UNIT	PAPER NUMBER
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2675

DATE MAILED: 08/12/2003

14

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/667,807

Applicant(s)
Darty

Examiner
Fritz Alphonse

Art Unit
2675



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Nov 7, 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 19-25 is/are rejected.
- 7) ☒ Claim(s) 12-18 is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 4 6) ☐ Other:

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DETAILED ACTION

Allowable Subject Matter

1. The indicated allowability of claims 7, 19-22 is withdrawn in view of the newly consideration of the prior art of record.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1-10, 19-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Kuwahara (U.S. Pat. NO. 6,486,866).

As to claim 1, kuwahara (fig. 1) discloses a display device, comprising: a carrier body that defines at least one channel (6); at least one particle (5) disposed in the at least one channel; and a

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controller (note the electrodes 7 and 8) that moves the at least one particle along the direction of extension of the at least one channel (col. 5, lines 11-26). Note in figure 11, Kuwahara discloses that at least one particle (25) provides maximum color reflection (note the light color of particles) when disposed at a top end of the at least one channel, and provides minimum color (note the dark color) reflection when disposed at the bottom end of at least one channel (see channels 22 and 25).

As to claim 2, kuwahara discloses a display including a bottom cover (counter substrate 3) disposed at a bottom end of the at least one channel, and a top cover (see col. 10, lines 65 through col. 11, line 8: transparent substrate made from glass sheet 2) disposed at a top end of the at least one channel, the bottom and top covers preventing the at least one particle from exiting the at least one channel.

As to claims 3-4, Kuwahara discloses a display according to claim 2, further including a lens disposed at a top surface of the top cover (note the transparent substrate 2 forming a lens disposed at the top surface of the channel; col. 10, lines 65 through col. 11, line 8).

As to claim 5, Kuwahara discloses a display further including a fluid disposed in the at least one channel, and the top and bottom covers are affixed at the top and bottom ends of the at least one channel to prevent the fluid from exiting the at least one channel.

As to claim 6, Kuwahara discloses a display, at least one particle includes multiple particles (col. 5, lines 33-45), the multiple particles including at least one cyan particle, at least one yellow particle and at least one magenta particle (col. 25, lines 12-19).

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As to claim 7, Kuwahara discloses a display, wherein the at least one channel includes, multiple channels that define an array, each of the multiple channels only housing one particle of the at least one cyan particle, the at least one yellow particle and the at least one magenta particle (col. 37, lines 13-22).

As to claim 8-10, Kuwahara discloses a display, wherein at least one particle is a solid (note in figure 1, color ball type particles are produced by preparing small-sized glass balls; col. 11, lines 50-61), and at least a micro-encapsulated (col. 6, lines 22).

As to claims 19-20, Kuwahara (fig. 11) shows a display, wherein the controller operates so that at least one particle is movable in analog fashion and can be controlled so as to be stationary relative to the carrier body at any position along the direction of extension of the at least one channel; and wherein the controller operates such that the at least one particle is controlled so as to only be stationary relative to the carrier body at top and bottom ends of the at least one channel.

As to claims 21-22, Kuwahara (fig. 11) shows a display, wherein the at least one colorant particle provides maximum color reflection when disposed at a top end of the at least one channel (note in fig. 11, the particles provide a light reflection at the top end of channel 6), and provides minimum color reflection when disposed at a bottom end of the at least one channel (the particles provide a dark reflection at the bottom of channel 6). The minimum color reflection is appreciably not visible to the human eye.

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Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 11 and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over kuwahara in view of Palmer (U.S. Pat. No. 6,052,287).

As to claim 11, kuwahara does not teach about a carrier body partially made of silicon.

However, in the same field of endeavor, Palmer discloses an integrated circuit chip carrier formed from a silicon substrate (see abstract).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Palmer's integrated circuit chip carrier with kuwahara. By doing so the silicon array chip carrier can serve as an additional heat sink or a thermal stress absorber when an IC chip is to be interfaced with a material such as a glass epoxy printed circuit board.

As to claims 23-25, method claim 23-25 correspond to apparatus claim 1. Therefore, they are analyzed as previously discussed in claim 1 above.

Allowable Subject Matter

6. Claims 12-15 and 16-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Response to Arguments

7. Applicant's arguments filed on 5/23/03 have been fully considered but they are not persuasive.

At the bottom of page 2 of the Remarks, Applicant argues that "Kuwahara, at col. 11, lines 22-32, discloses that the particles 6 (micro-capsules 6) are fixed between the substrates 2 and 3 by means of a fixative 9. Thus in Kuwahara, the micro-capsules do not move at all."

Applicant is directed to figure 11 which shows particles (25) located inside the channel (6). The number (6) represents a channel, not a particle. The particles (25) are not fixed in the channel (6). The particles are moving up and down inside the channel.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fritz Alphonse whose telephone number is (703) 308-8534.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Saras, can be reached at (703) 305-9720.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to: (703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.



F. Alphonse

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January 16, 2003



STEVEN SARAS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600